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## Prevention

### NEUTROPHIL / LYMPHOCYTE RATIO IN PATIENTS WITH NON-DIPPER HYPERTENSION

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**Background:** Non-dipper hypertensives had about three times the risk of atherosclerotic events than dipper hypertensives whose blood pressure was >10% lower at night compared to day time. Neutrophil/lymphocyte ratio is the strongest white blood cell predictor of adverse outcomes in coronary artery diseases. We aimed to determine whether neutrophil/lymphocyte ratio is elevated in non-dipper patients compared to dippers and healthy controls.

**Methods:** The total 120 patients study group included 80 patients with hypertension and 40 healthy subjects (20 male, mean age;  $51 \pm 4$ ) as control. Ambulatory blood pressure monitoring was performed for all patients. Hypertensive patients were divided into two groups; 40 dipper patients (20 male, mean age;  $50 \pm 5$ ) and 40 non-dipper patients (20 male, mean age;  $53 \pm 2$ ). A full blood count and high-sensitivity C-reactive protein test were performed in all subjects.

**Results:** Non-dipper patients demonstrated higher neutrophil/lymphocyte ratio compared to dipper patients and normotensive subjects ( $8.56 \pm 1.36$  vs  $3.38 \pm 0.33$  and  $1.92 \pm 0.42$ ,  $p < 0.05$ , respectively). High-sensitive CRP levels were also significantly higher in non-dippers compared to dippers and normotensive subjects ( $5.1 \pm 1.7$  mg/l vs  $3.8 \pm 1.5$  mg/l and  $1.7 \pm 0.8$  mg/l,  $p < 0.05$ , respectively). Neutrophil/lymphocyte ratio was significantly correlated with 24-hour systolic and diastolic blood pressure measurements and high-sensitivity CRP levels ( $p > 0.001$ ,  $r = 0.62$ ,  $r = 0.56$ ,  $r = 0.78$ , respectively) in non-dipper hypertensives.

**Conclusion:** Our results suggest that patients with non-dipping status tend to have increased inflammatory response. Neutrophil/lymphocyte ratio can be used to assess this inflammatory response in hypertensive patients.